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3. A process for the preparation of propylene homopolymers by polymerizing propylene at from 20 to 50° C and from 1 to 100 bar in the presence of a Ziegler-Natta catalyst system containing, as active components,

a) a titanium-containing solid component which is obtained by reacting a titanium halide with a cholorine-free compound of magnesium, an inorganic oxide as a carrier, a C_1-C_8-alkanol and an electron donor compound by a method in which, in a first stage, a solution of the chlorine-free compound of magnesium in an inert solvent is added to the inorganic oxide as a carrier, this mixture is allowed to react for from 0.5 to 5 hours at from 10 to 120°C and then reacted, at from -20 to 80°C with constant mixing, with a C_1-C_8-alkanol in at least a 1.3 fold molar excess, based on the compound of magnesium, to give a chlorine-free intermediate, the titanium halide and the electron donor compound are then added to said intermediate, the resulting mixture is allowed to react for at least 10 minutes at from 10 to 150°C and the solid substance thus obtained is then filtered off as washed and
in a second stage, the solid obtained from the first stage is extracted in an inert solvent containing at least 5% by weight of titanium tetrachloride and is washed in a liquid alkane

and, as cocatalyst,

b) an aluminum compound and

c) a further electron donor compound,

the molar ratio of the aluminum compound b) to the further electron donor compound c) in the polymerization being from 1.5 :1 to 9:1.

4. A process for the preparation of propylene homopolymers as claimed in claim 3, wherein the molar ratio of the aluminum compound b) to the further electron donor compound c) is from 2:1 to 8:1.

5. A process for the preparation of propylene homopolymers as claimed in claim 3, wherein ethanol is used as a C_1-C_8-alkanol in the preparation of the titanium-containing solid component a) in the first stage.

6. A process for the preparation of propylene homopolymers as claimed in claim 3, wherein a di-C_1-C_{10}-alkylmagnesium is used as the chlorine-free compound of magnesium in the preparation of the titanium-containing solid component a).

7. A process for the preparation of propylene homopolymers as claimed in claim 3, wherein an inorganic oxide which has a pH of from 1 to 6.5, a mean particle diameter of from 5 to 200 µm and cavities or channels having a mean particle diameter of from 1 to 20 µm and whose macroscopic volume fraction, based on the total particle, is from 5 to 30% is used as a carrier in the preparation of the titanium-containing solid component a).

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8. A process for the preparation of propylene homopolymers as claimed in claim 3, wherein silica gel is used as the inorganic oxide in the preparation of the titanium-containing solid component a).

9. A process for the preparation of propylene homopolymers as claimed in claim 3, wherein silica gel is used as the inorganic oxide in the preparation of the titanium-containing solid component a).

10. A process for the preparation of propylene homopolymers as claimed in claim 3, wherein a trialkylaluminum compound whose alkyl groups are each of 1 to 8 carbon atoms is used as the aluminum compound b).

11. A process for the preparation of propylene homopolymers as claimed in claim 3, wherein at least one organosilicon compound of formula (I)

$$R^1nSi(OR^2)_{4-n} \qquad (I)$$

where the radicals R^1 are identical or different as are each C_1-C_{20}-alky, 5- to 7-membered cycloalkyl, which in turn may be substituted by C_1-C_{10}-alkyl, or are C_6-C_{28}-aryl or C_6-C_{18}-aryl-C_1-C_{10}-alkyl, the radicals R^2 are identical or different and are each C_1-C_{20}-alkyl and n is 1,2, or 3, is used as further electron donor compound c).

Please charge any fees due in connection with the filing of this paper, including Extension of Time fees, to Deposit Account No. 11-0345. Please credit any excess fees to such deposit account.

Respectfully submitted,
Keil & Weinkauf

Ronald H. Smith
Reg. No. 43,679

1101 Connecticut Avenue, N.W.
Washington, D.C. 20036
(202) 659-0100
HBK/mks

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Please cancel claims 12 and 14.

[12. A propylene homopolymer obtainable by a process as claimed in claim 3.

14. A film, fiber or molding comprising the propylene homopolymer as claimed in claim 12.]